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capability for time periods of more than a second.

(iv) Values of ($ACRF_t$) for application to AC1 testing should be an average of at least two runs unless the manufacturer can demonstrate to the Administrator that one run repeatability is acceptable.

(v) Values of ($ACRF_t$) for application to AC1 testing are to be obtained for each vehicle and engine family combination. If only one vehicle configuration is selected to represent an engine family, the selected configuration is the vehicle expected to produce the highest air conditioning load requirements. A manufacturer may petition the Administrator to reduce the number of ($ACRF_t$) test vehicles for their product line, if they can show that the highest air conditioning loads are covered with a lesser number than one per family.

(vi) Test results, calculations, and dynamometer setting values associated with making these roadload determinations are to be retained by the manufacturer as part of their certification records.

(3) Perform the SC03 air conditioning test sequence as described in §86.160–00(c) with the following exceptions:

(i) The variable speed cooling fan of §86.160–00(c)(2)(ii) is replaced with the fixed speed cooling fan requirements of §86.159–00(b).

(ii) The position of vehicle windows is optional.

(iii) The nominal ambient air test conditions of §86.160–00(b)(5)(i) (A) and (B) are replaced with 76 °F and 50 grains of water/pound of dry air and the solar heat load of §86.160–00(b)(5)(i)(C) is omitted.

(iv) The air conditioning system is not operated during the SC03 test cycle. Operation of the air conditioning during preconditioning test cycles is optional.

(4) Section 86.160–00(d) is applicable to the AC1 test procedure.

(5) *$NO_X$ humidity correction.* Calculated $NO_X$ exhaust emissions from air conditioning tests conducted in a standard test cell at a nominal 50 grains of water/pound of dry air are corrected for humidity to 75 grains of water/pound of dry air (see the relationship of §86.144–94(c)(7)(iv)(B)).

(c) *AC2 test procedure.* (1) section 86.160–00(a) is applicable the AC2 test procedure except for the discussion of the environmental test requirements. The AC2 test procedure simulates the effect of air conditioning operation in the environmental cell test conditions by adding heat from the vehicle's heating system to the interior of the passenger compartment.

(2) Section 86.160–00(b) is applicable to the AC2 test procedure.

(3) Section 86.160–00(c) is applicable except for the following:

(i) Section 86.160–00(c)(3) is applicable except the drivers side front window is left open and all the others are closed.

(ii) The nominal ambient air test conditions of §86.160–00(b)(5)(i) (A) and (B) are replaced with 76 °F and 50 grains of water/pound of dry air and the solar heat load of §86.160–00(b)(5)(i)(C) is omitted.

(iii) The control position instruction of §86.160–00(c)(6)(iv) is replaced with set the A/C temperature control to the highest warm position (maximum for automatic systems).

(4) Section 86.160–00(d) is applicable to the AC2 test procedure.

(5) *$NO_x$ humidity correction.* Calculated $NO_X$ exhaust emissions from air conditioning tests conducted in a standard test cell at a nominal 50 grains of water/pound of dry air are corrected for humidity to 75 grains of water/pound of dry air (see the relationship of §86.144–94(c)(7)(iv)(B)).

[61 FR 54898, Oct. 22, 1996]

### §86.162–03 Approval of alternative air conditioning test simulations.

(a) Upon petition from a manufacturer or upon the Agency's own initiative, the Administrator will approve a simulation of the environmental cell for air conditioning test (SC03) described in §86.160–00 providing that the procedure can be run by the Administrator for SEA and in-use enforcement testing and providing that the following criteria are met:

(1) In deciding whether approvals will be granted, the Administrator will consider data showing how well the simulation matches environmental cell test data for the range of vehicles to be covered by the simulation including items such as the tailpipe emissions,

air conditioning compressor load, and fuel economy.

(2) For any simulation approved under paragraph (a) of this section, the manufacturer must agree to be subject to an ongoing yearly correlation spot check as described in § 86.163–00.

(3) Once a simulation is approved and used by a manufacturer for testing for a given vehicle, EPA agrees to use the simulation test procedure for all official testing conducted on that vehicle by the Agency for certification, SEA, and recall purposes, excluding spot check testing and vehicles which fail the spot check criteria as described in § 86.163–00.

(4) EPA will moniter the aggregate results of spot check testing and full environmental test cells. If EPA determines, based on such aggregate results, that any simulation is producing test results consistantly below those from a full environmental test cell, EPA may review its approval of the simulation.

(b) [Reserved]

[61 FR 54899, Oct. 22, 1996]

### § 86.163–00 Spot check correlation procedures for vehicles tested using a simulation of the environmental test cell for air conditioning emission testing.

This section is applicable for vehicles which are tested using a simulation of the environmental test cell approved under the provisions of § 86.162–00(a).

(a) The Administrator may select up to five emission data vehicles (one emission data vehicle for small volume manufacturers), including vehicles submitted for running change approval, each model year for any manufacturer undergoing the spot checking procedures of this section.

(b) Testing conducted under this section (including testing performed in an environmental test cell) will be considered as official data as described in § 86.091–29 and used in determining compliance with the standards. Such testing must comply with all applicable emission standards of subpart A of this part. Retests for the purpose of emission compliance will be allowed using the procedures described in § 86.091–29.

(c) *Spot check procedures.* (1) Subject to the limitations of paragraphs (a) and (d)(2)(iii) of this section, the Administrator may require that one or more of the test vehicles which use a simulation rather than actual testing in an environmental test cell for air conditioning emission testing be submitted at a place the Administrator will designate for air conditioning emission testing in an environmental test cell as described in § 86.160–00. The Administrator may order this testing to be conducted at a manufacturer facility. All manufacturers which use a simulation instead of environmental cell testing must have access to an environment test cell meeting the requirements of § 86.161–00 to perform this testing.

(2) An air conditioning emission test will be performed as described in § 86.162–00 in a full environmental test cell.

(i) The results of the original simulation test and the full environmental test cell required in paragraph (c)(1) of this section are compared. In order to pass the spot check, the test results must pass both the following two criteria:

(A) The $NO_X$ emission results of the simulation test must be at least 85% of the $NO_X$ emission results of the environmental chamber test.

(B) The fuel consumption of the simulation test must be at least 95% of the fuel consumption of the environmental chamber test.

(ii) If either of two criteria of paragraph (c)(2)(i) of this section were not met, a retest is allowed. The manufacturer may elect to conduct either a retest of the simulation procedure or the environmental chamber testing. In order to pass the spot check, the test results must pass both the following two criteria using the retest test result.

(A) The $NO_X$ emission results of the simulation test must be at least 85% of the $NO_X$ emission results of the environmental chamber test.

(B) The fuel consumption of the simulation test must be at least 95% of the fuel consumption of the environmental chamber test.

(iii) If either of the two criteria of paragraph (c)(2)(ii) of this section were not met, a second retest is allowed. The procedure not selected for the first retest must be used for the second retest, yielding two test results for